

**REGION 11 CORPORATE EXECUTIVE INFORMATION SYSTEM (CEIS)  
CEIS DATA IMPROVEMENT PLAN (DIP)  
DATA COMPLETENESS REPORT**

**★ SIX-MONTH UPDATE ★**



for  
TRICARE Northwest Lead Agency  
TRICARE Region 11  
Madigan Army Medical Center  
Ft Lewis, Washington

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## CONTENTS

	Page
TABLES.....	iii
INTRODUCTION.....	1
COLLECTED DATA.....	2
Madigan Army Medical Center (DMIS 0125).....	2
Inpatient Data Comparison Findings.....	2
Outpatient Data Comparison Findings.....	2
Bremerton Naval Hospital (DMIS 0126).....	3
Inpatient Data Comparison Findings.....	3
Outpatient Data Comparison Findings.....	3
Oak Harbor Naval Hospital (DMIS 0127).....	4
Inpatient Data Comparison Findings.....	4
Outpatient Data Comparison Findings.....	4
Fairchild AFB Clinic (DMIS 0128).....	5
Outpatient Data Comparison Findings.....	5
McChord AFB Clinic (DMIS 0395).....	6
Outpatient Data Comparison Findings.....	6
CONCLUSION.....	7
Summary of Findings.....	7
Plan.....	7

**TABLES**

Table 1 Completeness Summary MAMC Inpatient.....	2
Table 2 Madigan Inpatient Record Shortage Statistics.....	2
Table 3 Completeness Summary Madigan Outpatient.....	2
Table 4 Madigan Outpatient Record Shortage Statistics .....	2
Table 5 Completeness Summary Bremerton Inpatient.....	3
Table 6 Completeness Summary Bremerton Outpatient.....	3
Table 7 Bremerton Outpatient Record Shortage Statistics .....	3
Table 8 Completeness Summary Oak Harbor Inpatient.....	4
Table 9 Completeness Summary Oak Harbor Outpatient.....	4
Table 10 Oak Harbor Outpatient Record Shortage Statistics .....	4
Table 11 Completeness Summary Fairchild Outpatient.....	5
Table 12 Fairchild Outpatient Record Shortage Statistics .....	5
Table 13 Completeness Summary McChord Outpatient.....	6
Table 14 McChord Outpatient Record Shortage Statistics .....	6
Table 15 Summary Of Direct Care Comparison Findings .....	7

## REGION 11 CEIS DATA IMPROVEMENT PLAN (DIP) DATA COMPLETENESS REPORT

### INTRODUCTION

The Region CEIS 11 Integrated Contractor Team (ICT) began a data completeness process on July 9, 1998 and published the initial Data Completeness Report on August 12, 1998. This was part of a CEIS program effort to validate the completeness of the data in CEIS. Since the release of the initial report six months ago, we have continued to monitor data completeness after each monthly CEIS data base update. We have also worked on retrieving the missing records that were identified. This report updates the current direct care completeness status of CEIS in Region 11. The following explains how the direct care data was validated with the source system.

*Inpatient Analysis:* Analysis of the inpatient data was accomplished by comparing the inpatient record totals in the CEIS HBOC volume reports with the inpatient dispositions obtained from the source system (CHCS). The comparison to the source system was accomplished using both the CHCS 460 and CHCS MEPRS reports. The CHCS MEPRS report was felt to be the more accurate by the MAMC Patient Administration (PAD) personnel since it contains the “absent sick” and “carded for record only dispositions”. However, the CHCS MEPRS report was only available from January 1997 forward, earlier reports were archived. Madigan PAD personnel did have previous MEPRS reports and those numbers were used in Madigan’s comparison. The source systems were compared to CEIS by month for Fiscal Years (FY) 1996 – 1999. In doing this comparison the same day surgeries in CEIS were divided into inpatient and outpatient. The inpatient same day surgeries were added to the CEIS disposition totals and then compared to the source. This was necessary since CEIS separates the inpatient same day surgeries from the total dispositions and CHCS does not. The raw results of these comparisons can be found on our Region 11 CEIS website at [HTTP://198.250.141.61/CEIS/DATA.HTM](http://198.250.141.61/CEIS/DATA.HTM)

*Outpatient Analysis:* Analysis of outpatient data was accomplished by comparing the outpatient record totals in the CEIS HBOC volume reports with the outpatient encounters obtained from the source system (ADS). The comparison to the source system was accomplished using a TMMSC developed SQL that counted the ADS completed outpatient encounters by month. These source systems counts were compared to CEIS by month for Fiscal Years (FY) 1997 – 1999. The outpatient same day surgeries were added into the CEIS outpatient visit totals for the comparison. The child clinic outpatient visits were also added into the CEIS totals for this comparison. CEIS separates the same day surgeries and child clinic visits, but the ADS system reports we receive combines these into one total. So for an accurate comparison these must be combined. The raw results of these comparisons can be found on our Region 11 CEIS website at [HTTP://198.250.141.61/CEIS/DATA.HTM](http://198.250.141.61/CEIS/DATA.HTM)

## COLLECTED DATA

### Madigan Army Medical Center (DMIS 0125)

#### Inpatient Data Comparison Findings Update:

Inpatient data comparison of CEIS and CHCS was accomplished for fiscal years 1996 – 1999. The fiscal year summary for this comparison is at Table 1. CEIS met the 95% completeness goal for all fiscal years. During the initial evaluation in August 1998, there were 2 months where CEIS failed to meet the 95% completeness goal for inpatients record completeness. Attempts were made to retrieve these records from the source system (CHCS). However CHCS has archived the SDR records for these months making retrieval from that system impossible. An attempt to obtain the missing records from MEDCOM was equally unsuccessful, due to format problems. At this time it is doubtful that these records will ever be able to be retrieved.

**Table 1**

COMPLETENESS SUMMARY MADIGAN INPATIENT							
FY	CHCS 460 DISPS	CHCS MEPRS DISPS	CEIS IP DISPS	DIFF (CEIS – 460)	% 460 DISPS IN CEIS	DIFF (CEIS – MEPRS)	% MEPRS IN CEIS
1996	19469	20117	19547	78	100%	-570	97%
1997	14744	14883	14105	-639	96%	-778	95%
1998	10675	10776	10694	19	100%	-82	99%
1999(fytd)	1708	1719	1700	-8	99%	-19	99%

**Table 2**

MADIGAN INPATIENT RECORD SHORTAGE STATISTICS					
Month/Year	CHCS Disps	CEIS Disps	# Disps Short	"E" Records	% in CEIS
Oct 96	1612	1323	-289	0	82%
Nov 96	1497	1158	-339	0	77%

#### Outpatient Data Comparison Findings Update:

Outpatient data comparison of CEIS and ADS was accomplished for fiscal years 1997 – 1999. The fiscal year summary for this comparison is at Table 3. CEIS met the 95% completeness goal for all fiscal years. During the initial comparison that was conducted in August 1998 we identified 4 months where CEIS did not meet the 95% completeness goal. Attempts were made to obtain these missing records from the Ft Detrick database. This pull was able to fill 1 of the identified shortage months. The months where CEIS still does not meet the 95% goal are Nov 96, Mar 97, and Aug 97. The detailed record count information for these months is at Table 4. Our plan is to retrieve these records from the source system (ADS). However, at present obtaining the records from the source system is impossible due to a formatting issue with the local SADR extract. This problem is being fixed and when done we will retrieve attempt to these records.

**Table 3**

COMPLETENESS SUMMARY MADIGAN OUTPATIENT				
FY	ADS OP Visits	CEIS OP Visits	DIFF (CEIS – ADS)	% ADS VISITS IN CEIS
1997	546163	518570	-27593	95%
1998	822877	821102	-1775	99%
1999(fytd)	210496	207197	-626	99%

**Table 4**

MADIGAN OUTPATIENT RECORD SHORTAGE STATISTICS				
Month/Year	ADS Visits	CEIS Visits	# Visits Short	% in CEIS
Nov 96	37287	34779	-2508	93%
Mar 97	49252	43918	-5334	89%
Aug 97	51170	34672	-16498	67%

## Bremerton Naval Hospital (DMIS 0126)

### Inpatient Data Comparison Findings Update:

Inpatient data comparison of CEIS and CHCS was accomplished for fiscal years 1996 – 1999. The fiscal year summary for this comparison is at Table 5. CEIS continues to meet the 95% completeness goal for all fiscal years and all months. The inpatient completeness has continued to be well above the 95% threshold.

**Table 5**

COMPLETENESS SUMMARY BREMERTON INPATIENT							
FY	CHCS 460 DISPS	CHCS MEPRS DISPS	CEIS IP DISPS	DIFF (CEIS – 460)	% 460 DISPS IN CEIS	DIFF (CEIS – MEPRS)	% MEPRS IN CEIS
1996	5579	N/A	5581	2	100%	N/A	N/A
1997	4327	N/A	4302	-25	99%	N/A	N/A
1998	3673	3677	3666	-4	99%	-11	99%
1999(fytd)	623	624	615	-8	99%	-9	99%

### Outpatient Data Comparison Findings Update:

Outpatient data comparison of CEIS and ADS was accomplished for fiscal years 1997 – 1999. The fiscal year summary for this comparison is at Table 6. CEIS met the 95% completeness goal for all fiscal years. During the initial comparison that was conducted in August 1998 we identified 4 months where CEIS did not meet the 95% completeness goal. Attempts were made to obtain these missing records from the Ft Detrick database. This pull was able to fill 2 of the identified shortage months. The months where CEIS still does not meet the 95% goal are Oct 96 and Nov 96. The detailed record count information for these months is at Table 7. Our plan is to retrieve these records from the source system (ADS). However, at present obtaining the records from the source system is impossible due to a formatting issue with the local SADR extract. This problem is being fixed and when done we will retrieve attempt to these records.

**Table 6**

COMPLETENESS SUMMARY BREMERTON OUTPATIENT				
FY	ADS OP Visits	CEIS OP Visits	DIFF (CEIS – ADS)	% ADS VISITS IN CEIS
1997	225285	222204	-3081	99%
1998	313844	312084	-1760	99%
1999(fytd)	67718	67424	-294	99%

**Table 7**

BREMERTON OUTPATIENT RECORD SHORTAGE STATISTICS				
Month/Year	ADS Visits	CEIS Visits	# Visits Short	% in CEIS
Oct 96	4553	1944	-2609	43%
Nov 96	322	227	-95	71%

## Oak Harbor Naval Hospital (DMIS 0127)

### Inpatient Data Comparison Findings Update:

Inpatient data comparison of CEIS and CHCS was accomplished for fiscal years 1996 – 1999. The fiscal year summary for this comparison is at Table 5. CEIS met the 95% completeness goal for all fiscal years and all months. During the initial evaluation in August 1998, there were 5 months where CEIS failed to meet the 95% completeness goal for inpatients record completeness. We were able to retrieve the missing records from CHCS by doing a SIDR retransmit and this action filled all the months with shortages. The completeness has since continued to be well above the 95% threshold.

**TABLE 8**

COMPLETENESS SUMMARY OAK HARBOR INPATIENT							
FY	CHCS 460 DISPS	CHCS MEPRS DISPS	CEIS IP DISPS	DIFF (CEIS – 460)	% 460 DISPS IN CEIS	DIFF (CEIS – MEPRS)	% MEPRS IN CEIS
1996	1672	N/A	1691	19	101%	N/A	N/A
1997	1427	N/A	1449	22	101%	N/A	N/A
1998	1279	1320	1292	113	101%	-28	98%
1999(fytd)	176	178	170	-6	97%	-8	96%

### Outpatient Data Comparison Findings Update:

Outpatient data comparison of CEIS and ADS was accomplished for fiscal years 1997 – 1999. The fiscal year summary for this comparison is at Table 9. CEIS met the 95% completeness goal for all fiscal years. During the initial comparison that was conducted in August 1998 we identified 3 months where CEIS did not meet the 95% completeness goal. Attempts were made to obtain these missing records from the Ft Detrick database. This pull was able to fill 1 of the identified shortage months. The months where CEIS still does not meet the 95% goal are Oct 96 and Nov 96. The detailed record count information for these months is at Table 10. Our plan is to retrieve these records from the source system (ADS). However, at present obtaining the records from the source system is impossible due to a formatting issue with the local SADR extract. This problem is being fixed and when done we will retrieve attempt to these records.

**Table 9**

COMPLETENESS SUMMARY OAK HARBOR OUTPATIENT				
FY	ADS OP Visits	CEIS OP Visits	DIFF (CEIS – ADS)	% ADS VISITS IN CEIS
1997	75915	73113	-2838	96%
1998	134301	134115	-186	99%
1999(fytd)	33636	32671	-965	97%

**Table 10**

OAK HARBOR OUTPATIENT RECORD SHORTAGE STATISTICS				
Month/Year	ADS Visits	CEIS Visits	# Visits Short	% in CEIS
Oct 96	3478	1076	2402	31%
Nov 96	3480	3301	179	94%

## Fairchild AFB Clinic (DMIS 0128)

### Outpatient Data Comparison Findings Update:

Outpatient data comparison of CEIS and ADS was accomplished for fiscal years 1997 – 1999. The fiscal year summary for this comparison is at Table 11. Fairchild had a catastrophic ADS system failure and they lost all data through Sep 97 and most of Oct and Nov 97. This data loss makes it impossible to compare CEIS with ADS in fiscal years 1996 and 1997. During the initial comparison that was conducted in August 1998 we identified 3 months where CEIS did not meet the 95% completeness goal. Attempts were made to obtain these missing records from the Ft Detrick database. This pull was able to fill all of the previously identified shortage months. However, two other months have missing records due to problems with the Air Force rerouting of SADR transmittal through Brooks AFB. The files were never sent to CEIS and were deleted by Brooks AFB. Ft Detrick also did not receive these missing feeds. The months where the record shortages still occur are Jun 98 and Jul 98. Our plan is to retrieve these records from the source system (ADS). However, at present obtaining the records from the source system is impossible due to a formatting issue with the local SADR extract. This problem is being fixed and when done we will retrieve attempt to these records.

**Table 11**

COMPLETENESS SUMMARY FAIRCHILD OUTPATIENT				
FY	ADS OP Visits	CEIS OP Visits	DIFF (CEIS – ADS)	% ADS VISITS IN CEIS
1997	N/A	86092	N/A	N/A
1998	71850	75102	3252	104%
1999(fytd)	20154	19786	-368	98%

Note: Fairchild had a catastrophic ADS system failure and they lost all data through Sep 97 and most of Oct and Nov 97. This data loss makes it impossible to compare CEIS with ADS in fiscal years 1996 and 1997

**Table 12**

FAIRCHILD OUTPATIENT RECORD SHORTAGE STATISTICS				
Month/Year	ADS Visits	CEIS Visits	# Visits Short	% in CEIS
Jun 98	7479	2508	4971	34%
Jul 98	6785	6177	608	91%



### McChord AFB Clinic (DMIS 0395)

#### Outpatient Data Comparison Findings Update:

Outpatient data comparison of CEIS and ADS was accomplished for fiscal years 1997 – 1999. The fiscal year summary for this comparison is at Table 13. CEIS met the 95% completeness goal for fiscal years 1998 and 1999, but falls short for fiscal 1997. During the initial comparison that was conducted in August 1998 we identified 4 months where CEIS did not meet the 95% completeness goal. Attempts were made to obtain these missing records from the Ft Detrick database. This pull was able to fill 2 of the identified shortage months. The months where CEIS still does not meet the 95% goal are Oct 96 and Dec 96. The detailed record count information for these months is at Table 14. Our plan is to retrieve these records from the source system (ADS). However, at present obtaining the records from the source system is impossible due to a formatting issue with the local SADR extract. This problem is being fixed and when done we will retrieve attempt to these records.

**Table 13**

COMPLETENESS SUMMARY MCCHORD OUTPATIENT				
FY	ADS OP Visits	CEIS OP Visits	DIFF (CEIS – ADS)	% ADS VISITS IN CEIS
1997	64666	60041	-4625	93%
1998	64475	64447	-28	99%
1999(fytd)	15027	14716	-311	98%

**Table 14**

MCCHORD OUTPATIENT RECORD SHORTAGE STATISTICS				
Month/Year	ADS Visits	CEIS Visits	# Visits Short	% in CEIS
Oct 96	5008	3422	1585	68%
Dec 96	5118	2272	2846	44%

## CONCLUSION

### Summary of Findings

The initial comparison of Region 11 direct care data was conducted in July - August 1998. CEIS was compared to the source systems to identify months where CEIS was missing records. The goal was to ensure CEIS contained a minimum of 95% of the records that were on the source systems. The comparison identified 7 months (2-Madigan and 5-Oak Harbor) where the inpatient data fell below the 95% goal and 18 months (4-Madigan, 4-Bremerton, 3-Oak Harbor, 3-Fairchild, and 4-McChord) where the outpatient data fell below the 95% goal.

Since this initial comparison the ICT requested SIDR retransmits from CHCS and record pulls on outpatient records from the Ft. Detrick's database for the months identified as having record shortages. These efforts were successful in retrieving many of the missing records. Presently there are only 2 months (2-Madigan) where the inpatient data falls below the 95% goal and 9 months (3-Madigan, 2-Bremerton, 2-Oak Harbor, 2-Fairchild, and 2-McChord) where the outpatient data falls below the 95% goal. A summary of the direct care comparison findings as of the date of this report is at Table 15. Overall this represents a 72% reduction of inpatient month shortages and a 50% reduction of outpatient month shortages.

### Plan

The ICT is committed to having the most complete data possible. The following plan will be instituted to fix the holes in months where the data does not meet the 95% goal.

- Inpatient Shortage Fix Procedures
  - Madigan is the only facility with months where inpatient shortage occur. The shortage months are Oct and Nov of 1996. CHCS at Madigan archives the SIDR's after eighteen months making efforts to get a SIDR retransmittal unsuccessful. We also contacted MEDCOM to retrieve the missing records from their database, however the format of their SIDR data was in a format that could not be loaded on our system. Presently there are no other avenues available to retrieve the missing records.
- Outpatient Shortage Fix Procedure
  - We are awaiting a fix to the Local SADR Extract in ADS. This fix must be in place before any record can be retransmitted from the ADS servers. Once the fix occurs we will contact the MTF ADS system administrators to have them generate a local SADR extract for the shortage months and send to the IDB.

**Table 15**

SUMMARY OF DIRECT CARE COMPARISON FINDINGS							
MTF	Data Type	Source Total	CEIS Total	Diff	%Missing Aug 98	%Missing Jan 99	% After Plan Fix
Madigan	Inpatient	47495	46046	1449	3%	3%	1.7% <sup>1</sup>
Madigan	Outpatient	1579536	1546869	32667	3%	2%	0.5%
Bremerton	Inpatient	14207	14164	43	.02	.02%	N/A <sup>2</sup>
Bremerton	Outpatient	606553	602006	4547	3%	.07%	.03
Oak Harbor	Inpatient	4603	4602	1	4%	0	N/A <sup>2</sup>
Oak Harbor	Outpatient	243852	239899	3953	2%	1.6%	.5%
Fairchild	Outpatient	92004	180980	-88976 <sup>3</sup>	16% <sup>4</sup>	10% <sup>4</sup>	0%
McChord	Outpatient	144168	139204	4964	7%	3%	.02%

<sup>1</sup> – Most missing records scattered throughout 1996, % missing after fix FY97: 0.3% and FY98: .02%

<sup>2</sup> – No further fixes needed. Completeness meets standard in all areas.

<sup>3</sup> – Due to Fairchild ADS Server losing much their data CEIS has many more records for FY97 – FY99

<sup>4</sup> – Only FY 98 (Nov-Sep) and FY 99 were used for percentages due to missing records on the Fairchild ADS